

Appl. No. : 10/042,749
Amendment Dated : February 11, 2004
Reply to Office Action of : August 12, 2003

Atty. Docket No. 100718.409 MIC-54CON

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1-9 (cancelled)

Claim 10 (currently amended) A method for forming an improved field emission display device, comprising the steps of:

providing a screen; and

simultaneously applying a phosphor material and a binder on said screen, said binder material holding said phosphor material to said screen, said binder material comprising a conductive material.

Claim 11-12 (canceled)

Claim 13 (original) A method according to claim 10 wherein said binder material is selected from the group including: tin(II) 2-ethylhexanoate, tin (IV) isopropoxide, tin(II) oxalate, titanium (IV) ethoxide, zinc 2,4-pentane dionate, zinc acetate, and zinc oxalate.

Claim 14 (previously presented) A method according to claim 10 wherein said binder material is selected from the group including: poly(propylene carbonate), poly(propylene carbonate) and poly(ethylene Carbonate).

Claim 15 (original) A method according to claim 10 wherein said binder material is selected from the group including: polyvinyl alcohol, potassium silicate, and ammonium silicate.

Claim 16 (original) A method according to claim 10 wherein the glass screen is coated with transparent conducting film selected from the group including: indium tin oxide (ITO), zinc oxide (ZnO), tin oxide (SnO₂) doped with antimony (Sb), cadmium oxide (CdO), and cadmium tin oxide (Cadmium stannate) Cd₂SnO₄.

Claim 17 (original) A method according to claim 10 wherein the binder material is an organometallic compound selected from the group including: cadmium (Cd), titanium (Ti), zinc (Zn), tin (Sn), indium (In), antimony (Sb), tungsten (W), niobium (Nb), further comprising the step of heating said binder material to form conductive and/or semiconductive oxides.

Claim 18 (original) A method according to claim 10 wherein said binder material is transparent.

Claim 19 (original) A method according to claim 10 wherein said binder material is heated to remove any organics and leave behind a conducting or semiconducting oxide which binds the phosphor particles to each other and to the glass screen.

Claim 20 (currently amended) A method for forming a field emission display device, comprising:

- providing a faceplate comprising a transparent screen having at least one side;
- applying a transparent conductor to said side of said screen;
- simultaneously applying a layer of phosphor and conductive binder material to said transparent conductor, said binder material holding said phosphor to said transparent conductor;
- providing a baseplate comprising:
 - a base electrode;
 - a plurality of conical field emission cathodes having a base and a tip, the bases of said field emission cathodes being disposed on said base electrode; and
 - a grid electrode disposed proximal the tips of said field emission cathodes;
- positioning the baseplate proximal said side of said screen so that said baseplate is spaced apart from said faceplate; and
- providing a vacuum gap between said faceplate and said baseplate.

Claim 21 (currently amended) A method for forming a field emission display device, comprising:

providing a faceplate comprising a transparent screen having at least one side;
applying a transparent conductor to said side of said screen;
simultaneously applying a layer of phosphor and semiconductive binder material
to said transparent conductor, said binder material holding said phosphor
to said transparent conductor;
providing a baseplate comprising:
a base electrode
a plurality of conical field emission cathodes having a base and a tip, the
bases of said field emission cathodes being disposed on said base
electrode; and
a grid electrode disposed proximal the tips of said field emission cathodes;
positioning the baseplate proximal said side of said screen so that said baseplate is
spaced apart from said faceplate; and
providing a vacuum gap between said faceplate and said baseplate.